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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,018

06/07/2006

Shigeru Fujita

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EXAMINER

MALEKZADEH, SEYED MASOUD

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

04/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,018	Applicant(s) FUJITA ET AL.	
	Examiner SEYED M. MALEKZADEH	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 10-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/07/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Claims 10-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected groups II and III, there being no allowable generic or linking claim. Applicants timely traversed the restriction (election) requirement in the reply filed on 03/26/2008.

Applicant's election with traverse of group I, claims 1-9, in the reply filed on 03/26/2008 is acknowledged. The traversal is on the ground(s) that applicants argue "there is nothing to indicate that the search and examination of claims 10 and 11, in addition to claims 1-9, would impose a "serious" burden. Restriction should not be required in every case where separately claimed inventions are distinct from each other", also applicants argue "claims 10 and 11 together with claims 1-9 would add only two claims for a total of eleven claims, and it should not matter at this stage that the claims can be subsequently amended, since a restriction requirement can be imposed at any time, if and when it becomes proper"; furthermore, applicants argue "the search and examination of claims 10 and 11 together with claims 1-9 would not impose a serious burden. Therefore, at least claims 10 and 11 should be examined together with claims 1-9"

This is not found persuasive because applicants attention is drawn to this point that the election/restriction requirement applies to this application since group I, claims 1-9, also group II, claims 10-11, and group III, claim 12 do not relate to a single general inventive concept under PCT Rule 13.1, and also under PCT Rule 13.2, they lack the same or corresponding special technical features for the reasons mentioned in the previous office action mailed on 02/26/2008. In response to applicants' arguments, the election/restriction requirement for this application is not applied because of a serious burden on the examiner for the search and examination; however, the election/restriction requirement has been applied because the special technical features linking the apparatus claims 1-9, the method claims 10-11, and the product claim 12 do not provide a contribution over one invention, and there is no single general inventive concept exists between restricted groups.

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the

specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

In fourth page of the specification, disclosure lists a Japanese patent number JP 3378840 as a reference which has not been cited on information disclosure statement.

Drawings

Figures 1-2, 6, 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

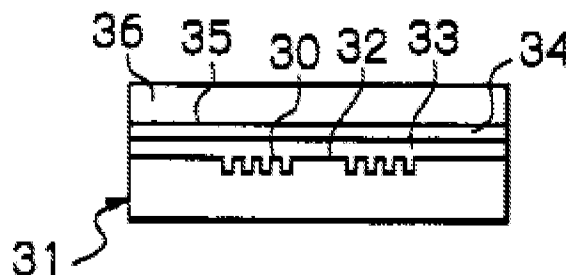
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 6-8 is rejected under 35 U.S.C. 102(b) as being anticipated by Murata et al. (US 6,468,618)

Murata et al. ('618) teach a stamper for molding an optical disk base in which the apparatus includes a mother portion (31) as a lower most section made of nickel (see lines 30-37, column 5), a nickel layer (36) as an uppermost section, and a middle section comprising a thick nickel layer (33) formed on the lower section (31) and a heat insulating layer (34) formed on the thick nickel layer (33). (See lines 38-61, column 5, also figure 5M)

Therefore, the prior art teaches an uppermost section made of nickel, a lower most section, also, made of nickel, and a middle section having a heat conductivity lower than the upper most section and including a metal layer as the same metal material as the uppermost section and the lowermost sections, and a heat insulating layer. Furthermore, Murata et al. ('618) disclose the heat insulating portions include heat resisting substances formed on the nickel layer. (See lines 53-59, column 2)

Fig. 5M



Murata et al. ('618) also teaches the heat insulating layer is made of polyimide particles which is a heat resisting resin (See lines 47-59, column 4 and lines 40-43, column 8) and a heat resistant inorganic polymer. (See lines 59-67, column 8)

The prior art, thus, meets all the structural claim limitations, and therefore, Murata et al. ('618) anticipates the claims 1, 3, 6-8.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

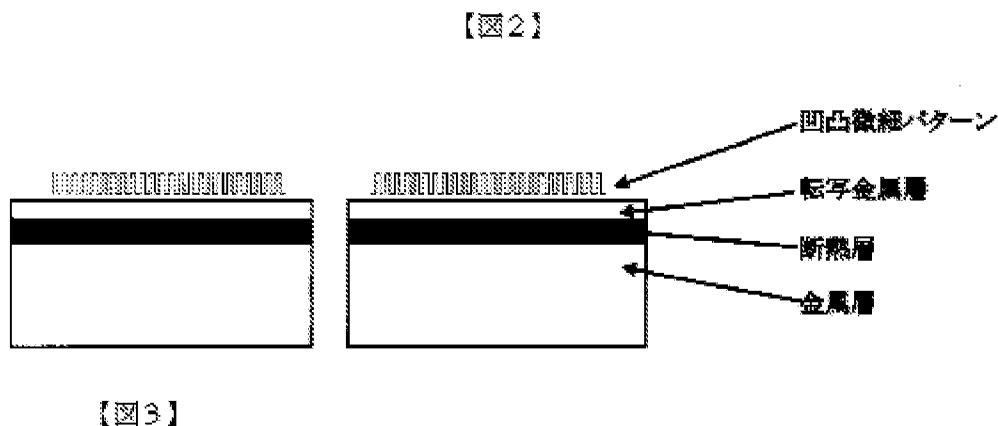
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murata et al (US '618) in view of Murata (JP 2002184046).

Murata et al. ('618) teaches all the structural limitations of a heat insulating stamper as discussed above in rejection of claims 1, 3, 6-8; however, fail to teach the metal material in the middle section are matrix formed with a plurality of minute voids formed on the matrix surface.

In the analogous art, Murata (JP '046) teaches a stamper for molding a high optical disk substrate in which the stamper includes a transfer metal layer, another metal layer, and a heat insulation layer dispersed between the transfer metal layer and another metal layer. (See abstract) Furthermore, Murata ('046) teaches the transfer metal layer is matrix formed and includes a plurality of concavo-convex minute patterns formed in the surface. (See abstract and paragraph [0008]-[0009] and [0012]-[0013]) Moreover, Murata ('046) teaches the advantages of providing a matrix formed surface metal transfer layer for dispersing the insulating material over the matrix surface in order to improve adhesion and transferability of the insulating layer over the metallic transfer layer and also to increase durability of the stamper in withstanding the molding of long time cycles.



Therefore, it would have been obvious for one of ordinary skill in the art at the time of applicant's invention to modify the teachings of the Murata et al. (US '618) by providing a matrix formed middle section metal material which include a plurality of minute voids in order to improve adhesion and transferability of the insulating layer over the metallic transfer layer and also to increase durability of the stamper in withstanding the molding of long time cycles, as suggested by Murata (JP '046).

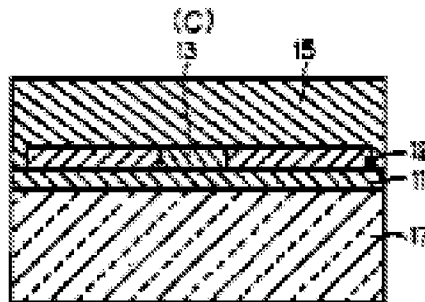
Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murata et al (US '618) in view of Fujita (JP 2001297488).

Murata et al. ('618) teach all the structural limitations of a heat insulating stamper as discussed above in rejection of claims 1, 3, 6-8; however, fail to teach the concentration of heat resisting substances varies in a depth direction of the insulating layer, as claimed in claim 5.

In the analogous art, Fujita (JP '488) teaches a stamper which includes a glass disk (17), a primary plating layer (11) which is formed on a glass

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disk (17), a boss plating layer (13) which is formed on the center portion of a primary plating layer (11), an insulating layer formed at the periphery of boss plating layer, and a secondary plating layer (15) which is formed on the layers (12 and 13) in which the insulating layer (12) include a specified thickness and properties. (See abstract) and the concentration of the heat resisting material in the insulating layer varies in the heat insulating layer thickness (See paragraphs [0025], [0029], and [0032]) to prevent peeling of the inner edges in the stamper while attaching to or releasing from die.

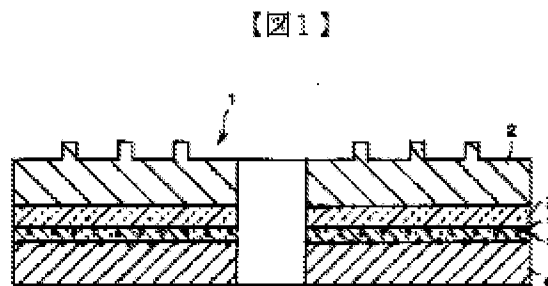


Therefore, it would have been obvious for one of ordinary skill in the art at the time of applicant's invention to modify teachings of the Murata et al. ('618) by providing an insulating layer in which the concentration of heat resisting substances varies in a depth direction of the insulating layer in order to prevent peeling of the inner edges in the stamper while attaching to or releasing from die, as suggested by Fujita (JP '488).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murata et al. (US '618) in view of Shibata (JP 2002-83450)

Murata et al. ('618) teach all the structural limitations of a heat insulating stamper as discussed above, however, fail to teach the heat resisting inorganic material used in the insulating layer comprises zirconia series, alumina series, silicon carbides series, or silicon nitride series, as claimed in claim 9.

In the analogous art, Shibata (JP '450) teach a heat insulation stamper (1) comprising sequential lamination of a transfer metal layer (2), a heat insulation layer (3), and a metal layer (6) in which the insulation layer (3) and the metal layer (6) bonded through a coating layer (4) mixed with a filler (5) made of an inorganic material comprising oxidized silicon, an aluminum oxide, zirconium oxide, Nitrides, silicon carbide, zirconium carbide, and silicon nitride, or the mixture of these substances.



Therefore, it would have been obvious for one of ordinary skill in the art at the time of applicant's invention to modify teachings of the Murata et al. (US '618) by providing a heat resisting inorganic material inside of the insulating layer including zirconia series, alumina series, silicon carbides

series, or silicon nitride series in order to improve durability of the heat insulation stamper and also to increase the strength of bonding between the insulation layer and the metal layer, as suggested by Shibata (JP '450).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Masoud Malekzadeh whose telephone number is 571-272-6215. The examiner can normally be reached on Monday – Friday at 8:30 am – 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin, can be reached on (571) 272-1189. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on

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access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. M. M./

Examiner, Art Unit 1791

/Steven P. Griffin/

Supervisory Patent Examiner, Art Unit 1791